

AMENDMENT TO THE CLAIMS

Applicants selectively amend the claims as follows:

Listing of Claims:

- 1 1. (Currently Amended) An apparatus comprising:
2 a data path output unit to output a packet header for a transaction layer packet, the packet
3 header including:
4 a format field to partially specify the packet header format, to specify whether the
5 transaction layer packet includes a data payload and to specify a size of the packet
6 header; and
7 a type field to specify a transaction type, the transaction type to include at least
8 one selected from the following group of: a memory request, an input/output request, a
9 configuration request, a message request and a completion, wherein the format field and
10 the type field together specify the packet header format, ~~the format field also indicates the~~
11 ~~size of the packet header and whether the packet includes data.~~
- 1 2-4. (Canceled).
- 1 5. (Previously Amended) The apparatus of claim 1, wherein the format field and the type field
2 are located in the first byte of the packet header to be output by the data path output unit.

1 6. (Currently Amended) An apparatus comprising:

2 a data path input unit to receive a packet header for a transaction layer packet, the packet
3 header including:

4 a format field to partially specify the packet header format, to specify whether the
5 transaction layer packet includes a data payload and to specify a size of the packet
6 header; and

7 a type field to specify a transaction type, the transaction type to include at least
8 one selected from the following group of: a memory request, an input/output request, a
9 configuration request, a message request and a completion, wherein the format field and
10 the type field together specify the packet header format, ~~the format field also indicates the~~
11 ~~size of the packet header and whether the packet includes data.~~

1 7-9. (Canceled).

1 10. (Previously Amended) The apparatus of claim 6, wherein the format field and the type field
2 are located in the first byte of the packet header to be output by the data path output unit.

1 11. (Currently Amended) A system comprising:

2 a transmitting device to transmit a packet header for a transaction layer packet, the packet
3 header including:

4 a format field to partially specify the packet header format, to specify whether the
5 transaction layer packet includes a data payload and to specify a size of the packet
6 header,

1 a type field to specify a transaction type, the transaction type to include at least
2 one selected from the following group of: a memory request, an input/output request, a
3 configuration request, a message request and a completion, wherein the format field and
4 the type field together specify the packet header format, ~~the format field also indicates the~~
5 ~~size of the packet header and whether the packet includes data; and~~
6 a receiving device coupled to the transmitting device, the receiving device to receive the
7 packet header.

1 12-14. (Canceled).

1 15. (Previously Amended). The system of claim 11, wherein the transmitting device and the
2 receiving device are coupled via a serial interface.

1 16. (Original). The system of claim 15, wherein the format field and the type field are located in
2 the first byte of the packet header to be output by the transmitting device.

1 17-18. (Canceled).

1 19. (Currently Amended) An apparatus comprising:

2 a data path output unit to output a packet header for a transaction layer packet, wherein
3 the packet header includes:

4 a format field to partially specify the packet header format, to specify whether the
5 transaction layer packet includes a data payload and to specify a size of the packet
6 header; and

7 a type field to specify a transaction type, the transaction type to include one of a
8 request or a completion, wherein the format field and the type field are located in the first
9 byte of the packet header and together specify the packet header format, the format field
10 also indicates ~~the size of the packet header and~~ whether the transaction layer packet
11 includes ~~a data~~ payload data that is four-byte, naturally aligned and limited in size by a
12 maximum data payload ~~value~~ size.

1 20. (Currently Amended) The apparatus of claim 19, wherein the transaction type ~~comprises to~~
2 include one of a request or a completion comprises the request to include at least one selected
3 from the following group of: a memory request, an input/output request, a configuration
4 request and a message request.

1 21. (Canceled).

1 22. (Currently Amended) The apparatus of claim ~~21~~ 19, wherein the ~~completion~~ transaction type
2 ~~comprises to include~~ one of a request or a completion comprises the completion to include at
3 least one selected from the following group of: a return read data completion, an
4 acknowledge completion of an input/output request and an acknowledge completion of a
5 configuration write transaction.

- 1 23. (New) The apparatus of claim 19, wherein the format field further specifies a size of the
2 packet header.
- 1 24. (New) The apparatus of claim 23, wherein the size of the packet header is based on a 32-bit
2 addressing format.
- 1 25. (New) The apparatus of claim 23, wherein the size of the packet header is based on a 64-bit
2 addressing format.
- 1 26. (New) The apparatus of claim 1, wherein the format field further specifies a size of the
2 packet header.
- 1 27. (New) The apparatus of claim 26, wherein the size of the packet header is based on a 32-bit
2 addressing format.
- 1 28. (New) The apparatus of claim 27, wherein the size of the packet header is based on a 64-bit
2 addressing format.
- 1 29. (New) The apparatus of claim 1, wherein the packet header comprises the packet header
2 including a length field, the length field to specify the length of payload data.

1 30. (New) The apparatus of claim 1, the packet header further including a length field, wherein
2 if the type field specifies the transaction type as a message and the message specifies a data
3 length, the length field specifies the data length.

1 31. (New) The apparatus of claim 1, wherein the transaction type specified in the type field is a
2 memory request and the memory request comprises a memory write request.

1 32. (New) The apparatus of claim 31, the packet header further including a byte enable field to
2 specify which bytes at a beginning portion of a data payload for the transaction layer packet
3 are enabled, the beginning portion to include a first 4 bytes of data in the payload data,
4 wherein the byte enable field includes 4 bits, each bit to correspond to a given byte in the
5 first 4 bytes of data, a value of 1 in each bit to specify that a corresponding given byte is
6 enabled, enabled to include an indication to a logical device addressed by the packet header
7 to write the corresponding given byte to a memory.

1 33. (New) The apparatus of claim 32, the packet header further including another byte enable
2 field to specify which bytes at an ending portion of a data payload for the transaction layer
3 packet are enabled, the ending portion to include a last 4 bytes of data in the payload data,
4 wherein the byte enable field includes 4 bits, each bit to correspond to a given byte in the last
5 4 bytes of data, a value of 1 in each bit to specify that a corresponding given byte is enabled.

1 34. (New) The apparatus of claim 6, wherein the format field further specifies a size of the
2 packet header.

1 35. (New) The apparatus of claim 34, wherein the size of the packet header is based on a 32-bit
2 addressing format.

1 36. (New) The apparatus of claim 35, wherein the size of the packet header is based on a 64-bit
2 addressing format.

1 37. (New) The apparatus of claim 6, wherein the packet header comprises the packet header
2 including a length field, the length field to specify the length of payload data.

1 38. (New) The apparatus of claim 37, wherein the data path input unit is to compare the length
2 specified in the length field to an actual length of the payload data and to treat the transaction
3 layer packet as a malformed transaction layer packet based on the actual length not matching
4 the length specified in the length field.